

PROC NLP: Nonlinear Minimization

NOTE: Initial point was changed to be feasible for boundary and linear constraints.

## Exhibit D

## PROC NLP: Nonlinear Minimization

## Optimization Start

N Parameter	Estimate	Parameter Estimates		Upper Bound Constraint	Active Bound Constraint
		Objective Function	Lower Bound Constraint		
1 CPO	0.100000	23.561196	0.100000	0.100000	Equal BC
2 _BOND	0.209167	17.327263	0.112500	1.000000	
3 _CASH_	0.209167	16.425350	0	1.000000	
4 _EAFE	0.180000	2.759056	0	0.180000	Upper BC
5 _ML_HYM	0.092500	13.147478	0	0.100000	
6 _W5000	0.209167	-4.304211	0	1.000000	

Value of Objective Function = 5.1142576555

## Linear Constraints

1	-8.327E-17 : ACT	1.0000	=	+	1.0000 * CPO	+	1.0000 * _BOND	+	1.0000 * _CASH_	+	1.0000 * _EAFE	+
2	1.0000 * _ML_HYM	+	1.0000	*	_W5000							
2	0.30917 :	0	<=	+	1.0000 * CPO	+	1.0000 * _W5000					
3	0.63083 :	0.9400	>=	+	1.0000 * CPO	+	1.0000 * _W5000					
4	0.48917 :	0	<=	+	1.0000 * CPO	+	1.0000 * _EAFE	+	1.0000 * _W5000			
5	0.40333 :	0.8925	>=	+	1.0000 * CPO	+	1.0000 * _EAFE	+	1.0000 * _W5000			

## PROC NLP: Nonlinear Minimization

## Null Space Method of Quadratic Problem

Parameter Estimates 6  
 Lower Bounds 6  
 Upper Bounds 6  
 Linear Constraints 5

## Optimization Start

Active Constraints 3 Objective Function 5.1142576555  
 Max Abs Gradient Element 17.266446025

Iter	Restarts	Function Calls	Active Constraints	Objective Function	Objective Function Change	Max Abs Gradient Element	Step Size	Slope of Search Direction
1	0	2	4	1.02847	4.0858	1.2405	0.922	-8.221
2	0	3	5	1.02187	0.00660	1.0173	0.144	-0.0492
3	0	4	5'	1.00583	0.0160	1.4148	0.688	-0.0356
4	0	5	4'	0.87553	0.1303	1.0785	1.000	-0.261
5	0	6	3'	0.85664	0.0189	0.0356	1.000	-0.0378
6	0	7	3	0.85609	0.000544	1.36E-15	1.000	-0.0011

## Optimization Results

Iterations 8  
 Gradient Calls 6 Function Calls  
 Objective Function 0.8560941258 7 Active Constraints 3  
 Slope of Search Direction -0.001088002 Max Abs Gradient Element 9.064933E-16

ABSGCONV convergence criterion satisfied.

## PROC NLP: Nonlinear Minimization

Optimization Results  
Parameter Estimates

N Parameter	Estimate	Approx Std Err	t Value	Approx Pr >  t	Gradient Objective Function	Active Bound Constraint
1 CPO	0.100000	0	9999.990000	0.000063662	17.121883	Equal BC
2 _BOND	0.116470	0.761171	0.153015	0.903337	-1.77636E-15	
3 _CASH_	0.026496	0.803287	0.032985	0.979009	-8.88178E-16	
4 _EAFE	0.023428	0.288107	0.081318	0.948345	-2.22045E-16	
5 _ML_HYM	0	0	0	1.000000	0.046529	Lower BC
6 _W5000	0.733605	0.256966	2.854870	0.214492	0	

Value of Objective Function = 0.8560941258

## Linear Constraints Evaluated at Solution

1 ACT	0	=	-1.0000	+	1.0000 * CPO	+	1.0000 * _BOND	+	1.0000 * _CASH_	+	1.0000 * _EAFE	+
2	1.0000 * _ML_HYM	+	1.0000 * _W5000									
3	0.83361	=	0	+	1.0000 * CPO	+	1.0000 * _W5000					
4	0.10639	=	0.9400	-	1.0000 * CPO	-	1.0000 * _W5000					
5	0.85703	=	0	+	1.0000 * CPO	+	1.0000 * _EAFE	+	1.0000 * _W5000			
6	0.03547	=	0.8925	-	1.0000 * CPO	-	1.0000 * _EAFE	-	1.0000 * _W5000			

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0.856094

Minimum Tracking Error Portfolio

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PROC NLP: Nonlinear Minimization

Deleted Identical Linear Constraints

0.100000 >=

NOTE: Initial point was changed to be feasible for boundary and linear constraints.

Optimization Start

Parameter Estimates	Lower Bound	Constraint
Gradient	1.383390	0.100000
Objective	4.403253	0
Function	3.018354	0
	1.954756	0
	0.756843	0
	1.114877	0
	1.336266	0
	1.175001	0
	3.731108	0

effective Function = 1.721973

## Linear Constraints

+	+	1.0000	*	FNDX	+	1
+	+	1.0000	*	FUSEX	+	0
+	+	0.00320	*	FCNTX	+	0
+	+	0.00320	*	FCNTX	+	0
+	+	0.0581	*	FCNTX	+	
+	+	0.2000	*	_GIC_	+	
+	+	0.0581	*	FCNTX	+	
+	+	0.2000	*	_GIC_	+	
+	+	0.0157	*	FGRIX	+	
+	+	0.0157	*	FGRIX	+	
+	+	0.0339	*	FGRIX	+	
+	+	0.0339	*	FGRIX	+	
+	+	0.9333	*	FCNTX	+	
+	+	0.9333	*	FCNTX	+	

## PROC NLP: Nonlinear Minimization

## Null Space Method of Quadratic Problem

Parameter Estimates 9  
 Lower Bounds 9  
 Upper Bounds 9  
 Linear Constraints 12

## Optimization Start

Active Constraints (+) 8 Objective Function 1.7219712407  
 Max Abs Gradient Element 1.455060137

Iter	Restarts	Function Calls	Active Constraints	Objective Function	Objective Function Change	Max Abs Gradient Element	Step Size	Slope of Search Direction
1	0	2	7'	1.39796	0.3240	2.5134	1.000	-0.648
2	0	3	6'	0.46385	0.9341	1.0729	1.000	-1.868
3	0	4	5'	0.38259	0.0813	0.6061	1.000	-0.163
4	0	5	6	0.35422	0.0284	0.4944	0.141	-0.216
5	0	6	5'	0.29360	0.0606	0.6479	1.000	-0.121
6	0	7	5'	0.28136	0.0122	0.3710	0.464	-0.0343
7	0	8	6	0.25006	0.0313	0.0438	0.395	-0.0987
8	0	9	5'	0.24989	0.000169	0.0523	1.000	-0.0003
9	0	10	5	0.24977	0.000118	2.29E-16	1.000	-0.0002

## Optimization Results

Iterations	9	Function Calls	11
Gradient Calls	10	Active Constraints	5
Objective Function	0.2497684956	Max Abs Gradient Element	2.775558E-16
Slope of Search Direction	-0.000235093		

ABSGCONV convergence criterion satisfied.



	Gradient Objective Function	Active Bound Constraint
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	N	Parameter	Estimate	Approx Std Err	t Value	Approx Pr >  t	Objective Function	Bound Constraint
1	1	CPO	0.100000	0	9999.990000	0.000063562	9.134575	Equal BC
2	2	FBNDX	0	0	0	1.000000	0.601800	Lower BC
3	3	FCNTX	0.040974	0.452121	0.090627	0.942462	-0.015954	
4	4	FGRIX	0	0	0	1.000000	0.604141	Lower BC
5	5	FLPSX	0.101853	0.365187	0.278905	0.826844	0.068897	
6	6	FMAXG	0.334913	0.608459	0.550428	0.679671	0.244587	
7	7	FOSFX	0.086911	0.102258	0.849918	0.551535	-1.057572	
8	8	FUSEX	0.255534	0.584214	0.437398	0.737506	0.258957	
9	9	_GIC_	0.079815	0.268879	0.296845	0.391974	0.291974	

Value of Objective Function = 0.2497684956

## Linear Constraints Evaluated at Solution

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Minimum Tracking Error Portfolio

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0.249768

Minimum Tracking Error Portfolio

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0.040974

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1

Iteration 1 minobjfn = 99999 last objfnval = 14:58 Thursday, April 25, 2002 13

PROC NLP: Nonlinear Minimization

Deleted Identical Linear Constraints

0.100000 >=

NOTE: Initial point was changed to be feasible for boundary and linear constraints.

## PROC NLP: Nonlinear Minimization

## Optimization Start

N Parameter	Estimate	Parameter Estimates			Active Bound Constraint
		Gradient Objective Function	Lower Bound Constraint	Upper Bound Constraint	
1 CPO	0.100000	8.575135	0.100000	0.100000	Equal BC
2 FBNDX	0.115698	1.290136	0	1.000000	
3 FCNTX	0.168840	0.569871	0	1.000000	
4 FGRIX	0	0.965063	0	1.000000	Lower BC
5 FLPSX	0	-0.390853	0	1.000000	Lower BC
6 FMAGX	0.396430	0.379284	0	1.000000	
7 FOSFX	-2.7756E-17	-1.562442	0	1.000000	Lower BC
8 FUSEX	0.219032	0.218568	0	1.000000	
9 _GIC_	-5.55112E-17	0.669596	0	1.000000	Lower BC

Value of Objective Function = 0.4969787227

## Linear Constraints

1	1.1102E-16	: ACT	1.0000	=	+	1.0000	* CPO	+	1.0000	* FBNDX	+	1.0000	* FCNTX	+	1.0000	* FGRIX	+	1.0000	
2	0.08361	:	1.0000	*	FMAGX	+	1.0000	* FOSFX	+	1.0000	* FUSEX	+	1.0000	* _GIC_	+	0.0146	* FOSFX	+	0.8000
3	_GIC_	:	0.0165	<=	+	0.8603	* FBNDX	+	0.00320	* FCNTX	+	0.000300	* FGRIX	+	0.0146	* FOSFX	+	0.8000	
4	0.11639	:	0.2165	>=	+	0.8603	* FBNDX	+	0.00320	* FCNTX	+	0.000300	* FGRIX	+	0.0146	* FOSFX	+	0.8000	
5	0.12353	:	-0.0735	<=	+	0.1397	* FBNDX	+	0.0581	* FCNTX	+	0.1057	* FGRIX	+	0.1915	* FLPSX	+	0.0561	
6	0.07647	:	0.0814	* FOSFX	+	0.00830	* FUSEX	+	0.2000	* _GIC_	+	0.1057	* FGRIX	+	0.1915	* FLPSX	+	0.0561	
7	0.10217	:	0.0814	* FOSFX	+	0.00830	* FUSEX	+	0.2000	* _GIC_	+	0.1304	* FLPSX	+	0.0277	* FMAGX	+	0.7889	
8	0.05783	:	0.0193	* FUSEX	+	0.1800	* FCNTX	+	0.0157	* FGRIX	+	0.1304	* FLPSX	+	0.0277	* FMAGX	+	0.7889	
9	0.10286	:	-0.1000	<=	+	0.00540	* FCNTX	+	0.0339	* FGRIX	+	0.00480	* FLPSX	+	0.0294	* FOSFX	+	0.00890	
10	0.09714	:	0.1000	>=	+	0.00540	* FCNTX	+	0.0339	* FGRIX	+	0.00480	* FLPSX	+	0.0294	* FOSFX	+	0.00890	
11	-2.776E-17	: ACT	0.8470	<=	+	1.0000	* CPO	+	0.9333	* FCNTX	+	0.8601	* FGRIX	+	0.8037	* FLPSX	+	0.9439	
12	0.02000	:	0.8746	* FOSFX	+	0.9828	* FUSEX	+	0.9333	* FCNTX	+	0.8601	* FGRIX	+	0.8037	* FLPSX	+	0.9439	
		:	0.8670	>=	+	1.0000	* CPO	+	0.9333	* FCNTX	+	0.8601	* FGRIX	+	0.8037	* FLPSX	+	0.9439	
		:	0.8746	* FOSFX	+	0.9828	* FUSEX	+	0.9333	* FCNTX	+	0.8601	* FGRIX	+	0.8037	* FLPSX	+	0.9439	

PROC NLP: Nonlinear Minimization

Null Space Method of Quadratic Problem

Parameter Estimates 9  
Lower Bounds 9  
Upper Bounds 9  
Linear Constraints 12

Optimization Start

Active Constraints (+) 6 Objective Function 0.4969787227  
Max Abs Gradient Element 1.7842596228

Iter	Restarts	Function Calls	Active Constraints	Objective Function	Objective Function Change	Max Abs Gradient Element	Step Size	Slope of Search Direction
1	0	2	7	0.34831	0.1487	0.3396	0.390	-0.474
2	0	3	6'	0.33689	0.0114	0.7729	1.000	-0.0228
3	0	4	5'	0.29360	0.0433	0.6479	1.000	-0.0866
4	0	5	5'	0.28136	0.0122	0.3710	0.464	-0.0343
5	0	6	6	0.25006	0.0313	0.0438	0.395	-0.0987
6	0	7	5'	0.24989	0.000169	0.0523	1.000	-0.0003
7	0	8	5	0.24977	0.000118	1.11E-16	1.000	-0.0002

Optimization Results

Iterations 7 Function Calls 9  
Gradient Calls 8 Active Constraints 5  
Objective Function 0.2497684956 Max Abs Gradient Element 1.110223E-16  
Slope of Search Direction -0.000235093

ABSGCONV convergence criterion satisfied.





Iteration 1 minobjfn = 99999 last objfnval =

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    0.249768

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Iteration 1 minobjfn = 99999 last objfnval =

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0.249768

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Obs	TICKER	WGT	LOWER	UPPER
1	FBNDX	0.00000	0.0	1.0
2	FGRIX	0.00000	0.0	1.0
3	FCNTX	0.04097	0.0	1.0
4	_GIC_	0.07982	0.0	1.0
5	FOSFX	0.08691	0.0	1.0
6	CPO	0.10000	0.1	0.1
7	FLPSX	0.10185	0.0	1.0
8	FUSEX	0.25553	0.0	1.0
9	FMAGX	0.33491	0.0	1.0

		constrai		
Obs	TICKER	WGT	LOWER	UPPER
1	FBNDX	0.00000	0.00	0.0
2	FGRIX	0.00000	0.00	0.0
3	FCNTX	0.04097	0.05	1.0
4	_GIC_	0.07982	0.05	1.0
5	FOSFX	0.08691	0.05	1.0
6	CPO	0.10000	0.10	0.1
7	FLPSX	0.10185	0.05	1.0
8	FUSEX	0.25553	0.05	1.0
9	FMAGX	0.33491	0.05	1.0

constrai

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PROC NLP: Nonlinear Minimization

Deleted Identical Linear Constraints

0.100000 >=

NOTE: Initial point was changed to be feasible for boundary and linear constraints.



## PROC NLP: Nonlinear Minimization

## Null Space Method of Quadratic Problem

Parameter Estimates 9  
 Lower Bounds 9  
 Upper Bounds 9  
 Linear Constraints 12

## Optimization Start

Active Constraints (+) 8 Objective Function 0.3599771115  
 Max Abs Gradient Element 0.9008402961

Iter	Restarts	Function Calls	Active Constraints	Objective Function	Objective Function Change	Max Abs Gradient Element	Step Size	Slope of Search Direction
1	0	2	8'	0.33909	0.0209	0.6148	0.477	-0.0575
2	0	3	7'	0.31213	0.0270	0.4581	1.000	-0.0539
3	0	4	6'	0.25374	0.0584	0.3220	1.000	-0.117
4	0	5	6	0.24997	0.00377	8.33E-17	1.000	-0.0075

## Optimization Results

Iterations	Function Calls
Gradient Calls	4
Objective Function	5
Slope of Search Direction	6
	6
	2.220446E-16

ABSGCONV convergence criterion satisfied.

## PROC NLP: Nonlinear Minimization

## Optimization Results Parameter Estimates

N	Parameter	Estimate	Approx Std Err	t Value	Approx Pr >  t	Gradient Objective Function	Active Bound Constraint
1	CPO	0.100000	0	9999.990000	0.000063662	9.146782	Equal BC
2	FBNDX	0	0	0	1.000000	0.596713	Equal BC
3	FCNTX	0.050000	0	9999.990000	0.000063662	0.021798	Lower BC
4	FGR1X	0	0	0	1.000000	0.605292	Equal BC
5	FLPSX	0.100616	0.359891	0.279572	0.826450	0.061883	
6	FMAGX	0.330541	0.567678	0.582268	0.664324	0.236304	
7	FOSFX	0.085201	0.058857	1.525329	0.369430	-1.056450	
8	FUSEX	0.255882	0.583954	0.438189	0.737083	0.250570	
9	_G1C_	0.077761	0.248400	0.313046	0.806861	0.250570	

Value of Objective Function = 0.2499677559

## Linear Constraints Evaluated at Solution

[illegible]



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0.249968

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constrai

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2

Iteration 2 minobjfn = 0.2499677559 last objfnval = 0.2499677559

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PROC NLP: Nonlinear Minimization

Deleted Identical Linear Constraints

0.100000 >=

NOTE: Initial point was changed to be feasible for boundary and linear constraints.

## PROC NLP: Nonlinear Minimization

## Optimization Start

N	Parameter	Estimate	Parameter Estimates		Active Bound Constraint
			Gradient	Upper Bound	
			Objective Function	Constraint	
1	CPO	0.100000	11.650796	0.100000	Equal BC
2	FBNDX	0.018669	4.171430	0	Lower BC
3	FCNTX	0.050000	0.999077	0.050000	Lower BC
4	FGRIX	0.831331	3.806933	0	Lower BC
5	FLPSX	0	0.451713	0	Lower BC
6	FMAGX	0	-0.392199	0	Lower BC
7	FOSFX	0	-2.786950	0	Lower BC
8	FUSEX	0	0.237452	0	Lower BC
9	_GIC_	2.775558E-17	3.696729	0	Lower BC

Value of Objective Function = 2.0749583504

## Linear Constraints

1	3.6082E-16	: ACT	1.0000	=	+	1.0000	* CPO	+	1.0000	* FBNDX	+	1.0000	* FCNTX	+	1.0000	* FGRIX	+	1.0000	
2	* FLPSX	+	1.0000	* FMAGX	+	1.0000	* FOSFX	+	1.0000	* FUSEX	+	1.0000	* _GIC_	+	0.0146	* FOSFX	+	0.8000	
3	4.12E-19	: ACT	0.0165	<=	+	0.8603	* FBNDX	+	0.00320	* FCNTX	+	0.000300	* FGRIX	+	0.0146	* FOSFX	+	0.8000	
4	* _GIC_	:	0.2000	:	+	0.8603	* FBNDX	+	0.00320	* FCNTX	+	0.000300	* FGRIX	+	0.0146	* FOSFX	+	0.8000	
5	* FMAGX	+	0.0814	* FOSFX	+	0.1397	* FBNDX	+	0.0581	* FCNTX	+	0.1057	* FGRIX	+	0.1915	* FLPSX	+	0.0561	
6	0.03311	:	0.1265	>=	+	0.1397	* FBNDX	+	0.0581	* FCNTX	+	0.1057	* FGRIX	+	0.1915	* FLPSX	+	0.0561	
7	* FMAGX	+	0.0814	* FOSFX	+	0.00830	* FUSEX	+	0.2000	* _GIC_	+	0.1304	* FLPSX	+	0.0277	* FMAGX	+	0.7889	
8	0.07862	:	-0.0566	<=	+	0.1800	* FCNTX	+	0.0157	* FGRIX	+	0.1304	* FLPSX	+	0.0277	* FMAGX	+	0.7889	
9	* FOSFX	+	0.0193	* FUSEX	+	0.1800	* FCNTX	+	0.0157	* FGRIX	+	0.1304	* FLPSX	+	0.0277	* FMAGX	+	0.7889	
10	* FOSFX	+	0.0193	* FUSEX	+	0.1800	* FCNTX	+	0.0157	* FGRIX	+	0.1304	* FLPSX	+	0.0277	* FMAGX	+	0.7889	
11	0.10000	:	-0.1000	<=	+	0.00540	* FCNTX	+	0.0339	* FGRIX	+	0.00480	* FLPSX	+	0.0294	* FOSFX	+	0.00890	
12	* FUSEX	:	0.07155	:	+	0.00540	* FCNTX	+	0.0339	* FGRIX	+	0.00480	* FLPSX	+	0.0294	* FOSFX	+	0.00890	
13	* FUSEX	:	0.01466	:	+	0.8470	* CPO	+	0.9333	* FCNTX	+	0.8601	* FGRIX	+	0.8037	* FLPSX	+	0.9439	
14	* FMAGX	+	0.8746	* FOSFX	+	0.9828	* FUSEX	+	0.9333	* FCNTX	+	0.8601	* FGRIX	+	0.8037	* FLPSX	+	0.9439	
15	0.00534	:	0.8670	>=	+	1.0000	* CPO	+	0.9333	* FCNTX	+	0.8601	* FGRIX	+	0.8037	* FLPSX	+	0.9439	
16	* FMAGX	+	0.8746	* FOSFX	+	0.9828	* FUSEX	+	0.9333	* FCNTX	+	0.8601	* FGRIX	+	0.8037	* FLPSX	+	0.9439	

PROC NLP: Nonlinear Minimization

Null Space Method of Quadratic Problem

Parameter Estimates 9  
Lower Bounds 9  
Upper Bounds 9  
Linear Constraints 12

Optimization Start

Active Constraints (+) 8 Objective Function 2.0749583504  
Max Abs Gradient Element 4.7054984602

Iter	Restarts	Function Calls	Active Constraints	Objective Function	Objective Function Change	Max Abs Gradient Element	Step Size	Slope of Search Direction
1	0	2	8'	1.47446	0.6005	2.4891	0.270	-2.567
2	0	3	8'	1.37975	0.0947	2.2318	0.0515	-1.888
3	0	4	7'	0.47702	0.9027	1.2026	1.000	-1.805
4	0	5	6'	0.37740	0.0996	0.5946	1.000	-0.199
5	0	6	7	0.32677	0.0506	0.4014	0.267	-0.218
6	0	7	6'	0.28177	0.0450	0.3733	1.000	-0.0900
7	0	8	7	0.25015	0.0316	0.0435	0.396	-0.0995
8	0	9	6'	0.24999	0.000155	0.0263	1.000	-0.0003
9	0	10	6	0.24997	0.000025	2.64E-16	1.000	-502E-7

Optimization Results

Iterations 9 Function Calls 11  
Gradient Calls 10 Active Constraints 6  
Objective Function 0.2499677559 Max Abs Gradient Element 2.220446E-16  
Slope of Search Direction -0.000050238

ABSGCONV convergence criterion satisfied.

### Optimization Results Parameter Estimates

N	Parameter	Estimate	Approx Std Err	t Value	Approx Pr >  t	Gradient Objective Function	Active Bound Constraint
1	CPO	0.100000	0	9999.990000	0.000063662	9.146782	Equal BC
2	FBNDX	0	0	0	1.000000	0.596713	Lower BC
3	FCNTX	0.050000	0	9999.990000	0.000063662	0.021798	Lower BC
4	FGRIX	0	0	0	1.000000	0.605292	Lower BC
5	FLPSX	0.100616	0.359891	0.279572	0.826450	0.061883	
6	FMAXG	0.330541	0.567678	0.582268	0.664324	0.236304	
7	FOSFX	0.085201	0.055857	1.525329	0.369430	-1.056450	
8	FUSEX	0.255882	0.583954	0.438189	0.737083	0.250570	
9	GUC_GIC	0.077761	0.248400	0.313046	0.806861	0.283349	

Value of Objective Function = 0.2499677559

## Linear Constraints Evaluated at Solution

[illegible]

Iteration 2 minobjfn = 0.2499677559 last objfnval = 0.2499677559

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\_RHS\_  
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0.249968

Iteration 2 minobjfn = 0.2499677559 last objfnval = 0.2499677559

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1



Iteration 3 minobjfn = 0.2499677559 last objfnval = 0.2499677559

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PROC NLP: Nonlinear Minimization

Deleted Identical Linear Constraints

0.100000 >=

NOTE: Initial point was changed to be feasible for boundary and linear constraints.

Optimization Start

Gradient

[illegible]

11.681492	0.100000
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0.808016  
3 989171

-0.342507 0

0.357369 0

[illegible]

Value of Objective Function = 2.2247362956

## Linear Constraints

[illegible]

## PROC NLP: Nonlinear Minimization

## Null Space Method of Quadratic Problem

Parameter Estimates 9  
 Lower Bounds 9  
 Upper Bounds 9  
 Linear Constraints 12

## Optimization Start

Active Constraints (+) 8 Objective Function 2.2247362956  
 Max Abs Gradient Element 4.9386144316

Iter	Restarts	Function Calls	Active Constraints	Objective Function	Objective Function Change	Max Abs Gradient Element	Step Size	Slope of Search Direction
1	0	2	8'	1.53617	0.6886	2.5366	0.284	-2.828
2	0	3	8'	1.30289	0.2333	2.1082	0.127	-1.961
3	0	4	7'	0.49740	0.8055	1.2956	1.000	-1.611
4	0	5	6'	0.38178	0.1156	0.5746	1.000	-0.231
5	0	6	7	0.30634	0.0754	0.2703	0.490	-0.204
6	0	7	6'	0.28593	0.0204	0.3634	1.000	-0.0408
7	0	8	7	0.25601	0.0299	0.0424	0.396	-0.0943
8	0	9	6'	0.25586	0.000147	0.2336	1.000	-0.0003
9	0	10	6	0.25388	0.00198	2.22E-16	1.000	-0.0040

## Optimization Results

Iterations 9 Function Calls 11  
 Gradient Calls 10 Active Constraints 6  
 Objective Function 0.2538751079 Max Abs Gradient Element 2.775558E-16  
 Slope of Search Direction -0.003969247

ABSGCONV convergence criterion satisfied.

## PROC NLP: Nonlinear Minimization

## Optimization Results Parameter Estimates

N	Parameter	Estimate	Approx Std Err	t Value	Approx Pr >  t	Gradient Objective Function	Active Bound Constraint
1	CPO	0.100000	0	9999.990000	0.000063662	9.079157	Equal BC
2	FBNDX	0	0	0	1.000000	0.624892	Lower BC
3	FCNTX	0	0	0	1.000000	-0.187342	Equal BC
4	FR1X	0	0	0	1.000000	0.598914	Lower BC
5	FLPSX	0.107469	0.359891	0.298616	0.815262	0.100740	
6	FMAGX	0.354761	0.567678	0.624933	0.644415	0.282191	
7	FOSEFX	0.094673	0.055857	1.694913	0.339340	-1.062665	
8	FUSEX	0.253954	0.583954	0.434887	0.738849	0.297033	
9	GIC	0.089143	0.248400	0.358869	0.780650	0.311132	

Value of Objective Function = 0.2538751079

## Linear Constraints Evaluated at Solution

[illegible]

Iteration 3 minobjfn = 0.2499677559 last objfnval = 0.2499677559

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\_RHS\_  
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0.253875

Iteration 3 minobjfn = 0.2499677559 last objfnval = 0.2499677559

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\_RHS\_  
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0.249968